2013 Chassis Cab Upfitter Cautionary Notes

CAUTIONARY NOTES TO BODY BUILDERS

To provide a safe and serviceable vehicle to the customer, certain precautions must be observed to ensure correct assembly and construction of the finished vehicle.

1. Do not revise tubes or hoses as service systems' performance may be seriously impaired.
2. Locate body cross sills to avoid interference with chassis parts, fuel lines or fuel gauge tank sending unit.
3. Body interior layout, body structure, accessory installation, water and holding tanks, fuel and propane tank, and motor generator locations should be designed to provide equal side-to-side loading on chassis to avoid vehicle lean and adverse effects on vehicle handling. The combined weight of the chassis, plus all items installed by the body builder, and an additional load allowance for reasonably anticipated passengers, liquids, luggage, and other equipment should not exceed the gross vehicle weight for which the particular chassis is designed, and the weight should be distributed between the front and rear axles so the maximum capacity rating of each axle system is not exceeded.
4. Undercoating or sound deadening material should not be sprayed on any chassis, power train or suspension parts. Hardware that requires special care includes such items as electrical wiring, radiator, engine, accessory drive, transmission, prop shaft, steering mechanism, springs, shocks, exhaust systems or linkages.
5. Use caution when installing the body near the diesel exhaust fluid (DEF) pump and lines. These components are susceptible to damage during installation if applied bodies are dropped on them. Repairs due to damage will be the responsibility of the final stage manufacturer. The part numbers for the fittings and o-rings are: Inlet Port – 68087316AA Return Port – 68087336AA Outlet Port – 68087315AA O-Ring – 68086587AA

PTO INSTALLATION ON G56 6-SPEED MANUAL TRANSMISSION

When installing a PTO unit on the G56 it is critical to follow the PTO manufacturer's installation instructions, particularly regarding use of the correct gasket and additional fluid fill quantity. For 2011 and beyond, the correct transmission oil fill is 5.1 quarts (was 6.1 quarts in previous years). With a PTO installed the correct final fluid level is between 1/2" and 1/4" from the bottom of the fill hole.

SPARE TIRE

Chassis Cab (box-off) models do not include the winch, spare tire and spare wheel, however, the spare tire and wheel can be ordered as an option (sales code TBE).

NEW VEHICLE STORAGE

Protection of new vehicles from damage and deterioration prior to retail delivery is the body builder's and his dealer's responsibility as is any expense incurred as the result of such damage or deterioration.

1. Check engine coolant and antifreeze protection
2. After storage for more than 21 days the battery should be recharged for at a minimum of 24 hours. For long storage in cold temperatures, the battery should be disconnected, removed and stored at a temperature above freezing.
3. Inflate tires to recommended pressure
4. Place parking brake in "off" position
5. Observe necessary security precautions to avoid pilferage and vandalism
6. Keep windows closed, doors locked and trim covers intact and in position
7. Keep engine, steering wheel and cab back covers intact and in position when applicable
8. Do not use chalk or crayon on glass or painted surfaces. Scratches may result

Headlamp/Taillamp Circuit

Adding lamps to the headlamp/taillamp circuits without a separate relay may damage the electrical system. Please refer to the Lighting information in the following link: Lighting Capacity per Circuit

Wiring Provisions

PTO and ODB II

2013 Ram Chassis Cabs, have a provision that allows ODB II monitoring systems to be disabled while the PTO system is being operated. This will prevent "false" lighting of the "Check Engine" lamp due to the engine-PTO driven accessories.

For gasoline applications, ODB II monitoring is disabled by applying a 12-volt ignition feed to circuit G113.

For diesel applications, the PTO circuit automatically disables ODB II monitoring,

Lighting considerations – Cab Chassis

As built, the Cab Chassis provides combined rear turn/stop lamp lighting. A typical upfitter installation will remove the tail lamp assembly and replace it with one of their own. Care must be exercised to match the original equipment lamp loads so that proper fault detection by the electronic control module is maintained.

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Frame Alteration Information

The following section shows suggested guidelines on modification of Ram frames for various after market applications.

***Caution*:** *Use of proper safety equipment is recommended when performing any modifications or alterations*.

The following recommendations are consistent with industry standards:

Chrysler Group LLC doesn't recommend any modifications or alterations to the frame assembly. Modifications or alterations (i.e. hole drilling, welding, etc.) to the frame assembly are the responsibility of persons performing these modifications or alterations. Anyone altering the frame must assume complete responsibility for assembly, performance, reliability and compliance of applicable FMVSS requirements.

The following procedures and specific precautionary instructions are recommended for proper installation of special bodies and/or equipment on the Ram Frame. Failure to follow these recommendations could result in damage to the basic vehicle and possible injury to occupants.

Holes

Holes are not to be drilled in the top or bottom of the frame rails. Holes to mount out-riggers, brackets, and supports must be drilled in the web (vertical sides) of the frame rail with the following restrictions:

1. Hole diameter should not exceed 20 mm (0.75 in.).
2. Material between edge of hole and top or bottom of the frame rail must not be less than 40 mm (1.60 in.).
3. The minimum edge distance between any two (2) holes must be larger than twice the diameter of the larger hole.
4. Any thru-fastener that torques down on both external surfaces of the rail must use an internal spacer to prevent crushing the rail tube.
5. All holes should be drilled in the frame using appropriate drilling practice and safety precautions.
6. Avoid drilling holes near the fuel tank, fuel and brake lines and other lines and wires to avoid damage to them.

Welding

Prior to any welding, the following must be done:

1. Avoid welding near the fuel tank, fuel and brake lines or other components that may be damaged by the heat of welding. If it is necessary to weld near these areas, use wet cloths to cover these components. If it is necessary to remove the fuel tank, lines or other components, do it in accordance with applicable service manual procedure.
2. Components near the welding area which could be damaged by excessive heat must be removed or adequately shielded.
3. Disconnect the battery(ies).
4. Precautionary measures should be used to prevent electrical system components or wiring damage.
5. Frame e-coating must be removed from the welding and surrounding area.

Use proper welding techniques to avoid stress risers that may adversely affect frame performance.

After welding:

1. Carefully inspect electrical components and wiring for shorts or other damage.
2. Apply protective coating to areas where coating was removed.

Dodge Fuel Fill Tube Kit

A new fuel fill housing will be included in box-off models and has been designed for easy installation (external flange mounted) and to insure proper fuel tube fill angle of 37°. Included in the kit are installation instructions, various fill and vapor hoses that can be cut and assembled per body applications, hose clamps, ground strap, and a hose connector. A DIESEL or GAS fuel label will also be included depending on application. The part numbers for the kits are:

Diesel: 52121252AA
Gas: 68003151AA
Chassis Cab: 52121693AD

Installation Suggestions

- **Always mount the fuel fill housing as high as possible and route the fuel fill tube on a continuous downward slope (approx. 37°) to insure good fuel fill quality.**
- Mount the fuel fill tube upper housing with the vent tube at the 9:00, 12:00 or 3:00 position.
- When routing the vent tube, make sure there are no dips or sags. It should have a downward slope from the "fuel filler tube upper" to the fuel tank vent nipple. Tie strap it to prevent any sags that may accumulate fuel in the hose.
- **Always connect the ground strap from the fuel fill upper to the frame. This is a must! If the ground strap is not attached Electro static build up could occur during refueling.**

Body Mount Guidelines for Ram Box Removal or Delete

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The following section shows suggested guidelines for Body Mounts for Ram 2500/3500 applications.

Caution: *Use of proper safety equipment is recommended when performing any modification or alterations.*

These guidelines apply to second stage manufacturers who mount a body to the Ram Pickup Truck. This applies to trucks which have been ordered from the factory with the box deleted or those where the factory installed box is removed after delivery.

- The mounting location brackets on the chassis that are used for the pickup bed mounting should be utilized for installing the new body. On the short bed there are six mounting location brackets and on the long bed there are eight.
- Grade 10.9 M12 Fasteners (or equivalent) should be used. Torque to 60 ± ft-lbs.
- With the body in position the gap between the body mounting points and the chassis mounting brackets should be minimized to assure that there is no distortion of the chassis mounting brackets when the body mounting fasteners are torqued to specification. Metal spacers are recommended in cases where the gap exceeds 2 mm.

Since the guidelines might not be appropriate for every application of a body installation, following the guidelines listed above does not eliminate the responsibility of the second stage manufacturers to certify to compliance to FMVSS and CMVSS standards.

The final stage manufacturer who installs a second unit body on the chassis is responsible for compliance with FMVSS/CMVSS 204(1), 208[2], 212[3], 214(3)(4),219(3), and 301(3) Federal Regulations. Questions regarding compliance with FMVSS/CMVSS regulations should be directed to your legal counsel, the National Highway Traffic Safety Administration, or Transport Canada.

Body mounting Guidelines for Ram 3500 Chassis Cab

These guidelines apply to second stage manufacturers who mount a body to the Ram Chassis cab. There are figures in the dimensions/frame and exhaust section that show pierced holes that are provided for shear plate attachment.

Body mounting Details

1. The applied body should be mounted a minimum of 3 inches away from the rear surface of the cab as measured at the center of the cab.
2. U Bolt attachment in the transition area of the frame i.e. the area behind cab where the frame transitions from a deep section to a narrow section is not recommended. Shear plate holes are provided in this area. The 84 CA frame does have a straight frame area beyond the transition where U bolts are allowed.
3. At the rear of the frame there are several options. Two shear plate holes are provided at the rear of the frame as shown in the dimensions/frame and exhaust section. These holes may be combined with the pair of holes that attach the taillight. They can be enlarged to 21/32" like the shear plate holes if required. This can be used to attach the body as well as a bumper/step/trailer hitch bracket. In addition, space is provided at the rear of the frame for U bolt access. There are relief areas at the corners of the rear fuel tank to allow U bolt installation with adequate clearance to the fuel tank.
4. Shear plates at the front attachment should be angled forward 45 to 60 degrees from the horizontal. This is easily done by centering the shear plates on the two frame shear plate holes and angling them forward.
5. Shear plate holes are sized to allow the use of 5/8 inch diameter fasteners. Grade 8 or higher fasteners should be used with hardened washers. They should be torqued to 65 ft/lbs.

The final stage manufacturer who installs a second unit body on the chassis is responsible for compliance with FMVSS/CMVSS 204, 208,212,214, 219, and 301 Federal regulations. Questions regarding compliance with FMVSS/CMVSS regulations should be directed to your legal counsel, the National Highway Traffic Safety Administration, or Transport Canada.

Park Brake System

The park brake cables are routed to provide the most efficient system possible. When up-fitting, do not modify, alter or re-route the cables. NOTE: If the cables are modified from their OEM positioning, the final stage manufacturer would be responsible for recertifying the vehicle to FMVSS 105.

If the up-fit has structure (brackets, bolts, etc) that requires the same space as the cables, try to protect the cables and their routing. In both the park brake applied and release positions, the cables cannot be pinched, have movement restricted, moved or held out of their location. The cable strand (silver in color) cannot be covered with a foreign substance (paint, e-coat, underbody coating, etc) within 3" (75 mm) of the front cable frame bracket and within 3" (75 mm) of the front of the tensioner (bent nail, threaded rod, and bowtie equalizer). The cables and/or routing can be protected by using grommets, soft surfaces or other means that will not cause a rub condition. Cables

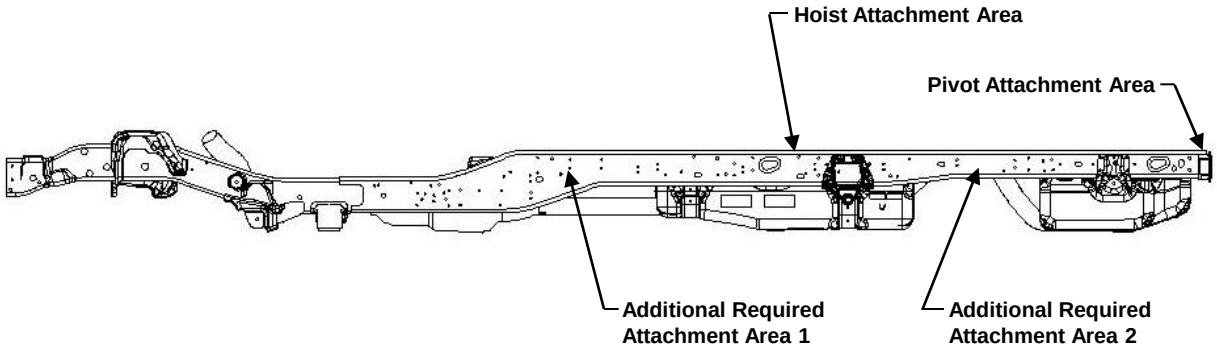
should not rub on any surface as this could potentially cause damage to the cable and possibly degrade or impair parking brake performance.

Also note: The tensioner (bent nail, threaded rod, bowtie equalizer) on the right rear parking brake cable moves forward in vehicle when the park brake is applied and moves rearward in vehicle when released. This is a conduit reaction system where the right cable must move forward when applied in order for the vehicle to park.

Dump Body Installation Requirements

Four attachment points are required for 4500 and 5500 models.

- The hoist and pivot attachment areas can use typical industry standard attachments.
- The additional required attachment areas require attachment only for control of the downward load. In other words, shear plates are not required. A spacer 2 inch x 2 inch that contacts the subframe and the top of the vehicle frame is sufficient.
- Attachment area 1 is just behind the cab in the front sheer plate hole area.
- Attachment area 2 is approximately at the centerline of the rear axle.


Hoist Attachment Area
Pivot Attachment Area
Additional Required Attachment Area 1
Additional Required Attachment Area 2